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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,785	07/15/2003	Alexander S. Bonovik	ATM1-665	7812

7590 02/09/2005

ADVANCED TECHNOLOGY MATERIALS, INC.  
7 Commerce Drive  
Danbury, CT 06810

EXAMINER
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DENTZ, BERNARD I

ART UNIT	PAPER NUMBER
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1625

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/619,785

Applicant(s)

BOROVIK ET AL.

Examiner

Bernard Dentz

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-66 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-13, and 15-17, drawn to Si oxiranyl cpds., classified in class 549, subclass 215.
- II. Claims 1,2 and 14, drawn to disilane cpds., classified in class 556, subclass 430 e.g.
- III. Claims 18-21 drawn to compositions containing a Si oxiranyl cpd. classified in class 106, subclass 287.16.
- IV. Claims 18-21, drawn to compositions containing disilane cpds., classified in class 106, subclass 287.13.
- V. Claims 22-34 , drawn to a method of synthesizing the cpds.of Gp. I, classified in class 549, subclass 215.
- VI. Claims 35-39, drawn to a method of synthesizing a cpd. Of Gp. II, classified in class 556, subclass 435, e.g.
- VII. Claims 40-66, drawn to method of forming a low K, high strength dielectric film on a substrate using a Si oxiranyl cpd. using vapor deposition, classified in class 427, subclass 485.
- VIII. Claims 40-66, drawn to a method of forming a low K, high strength dielectric film on a substrate using a disilane cpd. using vapor deposition, classified in class 427, subclass 489.

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The inventions are distinct, each from the other because of the following reasons:

Claim 1 is considered to be drawn to the cpds. noted therein as (i) and (ii). These groups of compounds are distinct in structure 1 having 1 Si and the other 2 etc. These cpds. of course have uses other than as ingredients in compositions used to create a low K, high strength dielectric film. There are other methods than vapor deposition which can be used to make these films and thus the methods are deemed restrictable from the compositions. Finally there are other methods that can be used to make the cpds. of Gps. I and II than those claimed herein. Thus these Gps. are distinct and independent.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicants should elect a single disclosed species of Si cpd. and also if 1 of the the vapor deposition process Gps. is elected the species of vapor deposition of claim 60 or 61.


Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined and an election of species even though the requirement be traversed (37 CFR 1.143).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Dentz whose telephone number is 571-272-0683. The examiner can normally be reached on Mon-Fri from 8:30 to 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang, can be reached on 571 272-0562 . The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dentz

2-5-2005

BERNARD DENTZ  
PRIMARY EXAMINER  
GROUP ~~100~~ 1600